

several of the leading Provincial Exhibitions, cows and helters have taken prizes when competing with pure bred stock, which has also been the case with fat oxen. A steer of this herd, having two crosses of shorthorn, took first honours at the fat cattle shows of London and Birmingham, the same year.

"The beef of cross bred cattle is now generally admitted in the English markets to possess superior quality,—as having a greater quantity of lean than that of most of the pure breeds, and also from the fat being well mixed with the flesh or muscular parts, and consequently presenting more roasting meat and less offal than most other animals. Again, as regards profit, reckoning from birth to maturity, we may safely assert that they may be equalled, but cannot be surpassed by any of our pure breeds for producing an equal weight of meat at a given age.

"To those about to commence breeding crosses, whatever be the race to which the cows may belong, our observation and experience induce us to recommend shorthorn sires, as their purity can be better depended upon than that of other bulls; and we are fully convinced that even for the purpose of cross breeding, the purer the blood on the paternal side the more clearly will excellence be stamped on the progeny.

"What constitutes a pure bred animal is a point not very clearly defined. Mr. Strafford, the editor of 'Contis's Herd Book,' a high authority on such matters, considers that animals which cannot show a descent for four generations from pure bulls are ineligible for entry in the Herd book; and it is generally considered that such a pedigree will suffice to produce an animal possessing all the characteristics of his male progenitors. The herd of crosses we have attempted to describe consists at the present time of forty females, several of which have reached the fourth cross, and some of them have been entered in the Herd book: those which have attained this stage possess the general character of the improved shorthorn; they are straight in the back, well ribbed, short in the leg, with abundance of hair, and of very superior quality. In short, in appearance, they could not be distinguished from the breed, and promise, if their management be carried out with the same liberality and intelligence which have hitherto been displayed, to become at no distant date a most important and valuable breed of cattle."

Plan for Hog Pen.

Some one asks for a plan for a "hog pen," and although Frank Wicks (in his excellent article on "pork raising") answers the question in regard to sleeping pens, I propose to give my plan for a house to raise pigs in. I wished a place large enough to raise twelve litters of pigs at one time; at least to have twelve separate pens. I wished to have an entry between the pens so that I could feed both sides. I therefore built my pen forty feet long and twenty feet wide, constructing it in the following manner, (which of course could be varied according to the amount of money to be expended.) I took a plough and scraper and raised the ground in the middle so as to slope off from the middle or entry part where the proposed building was to be until ten feet outside the pen. I then set a row of posts ten feet high, and two feet from the middle, the whole length of the pen and the same number two feet from the middle on the other side and eight feet apart lengthwise of the building. This left the entry way four feet wide. I then set the two outside rows of posts eight feet apart and five feet high. I then spiked scantling on the top of each row of posts, then taking common, sound twelve foot boards, (the broader the better,) I nailed them on this scantling leaving the lower or outside end, to extend three inches outside the outside posts, the upper or inside end extended over two feet above the high middle posts the ends almost touching, then by taking and nailing a board on the top of the ends of these boards lengthwise of the pen, one on each side, they formed the comb of the roof, then by taking half inch siding, ripping it and using this for battens the cracks, you have a pretty good roof—or if you have plenty of money you can leave off the bating and cover with shingles; I used the former. I then boarded up each side the entryway three feet high making a trough and apron between each post; the partitions between each pen need not be over three feet high. I then boarded up the outside posts leaving a trap door for each pen. I then put up a board fence eight feet outside the pen and put in moveable partitions across from the pen to this fence, thus making a yard eight feet square for each pen of the same size. I then boarded up the ends making a door at each end of the entry and a window over the door.

By having a trap door in the fence opening into the corner of the hay lot I can put in my sows before they pig without trouble and by removing this movable partition between the yards can turn out or in any one I wish.—J. D. P. in *Prairie Farmer*.

Vices of Horses.

Idle horses, or those not working very hard, are apt to acquire habits that are very annoying, as crib-biting, weaving, pawing, dislike to go through a doorway, kicking the sides of the stall, &c. The first is considered by many unsoundness as well as a disagreeable habit, and they would reject a horse, no matter how good, or ever so well suited to the business they wanted him to perform, if he possessed this trick. I do not look at it in this light, and apart from the annoyance of listening to the sound usually made by those addicted to the habit I am not aware that it injures the animal. The idea that they "uck wind" enough to make them any more liable to colic or rupture of the intestines, is certainly false in all that have come under my observation. One of the finest "Gentlemen's Horses" I ever knew was a confirmed crib-biter. He was a large, brown gelding, nearly sixteen hands high, stylish and slow, had trotted in 2.25, could pull a waggon almost that fast, gentle and reliable in every place. If there was anything he could lay his teeth on he was sure to crib, yet always kept easy; would stand an immense amount of work and trot long distances, never, to my knowledge, sick a day in his life. The last I knew of him, he was owned by a gentleman in Cincinnati, who valued him very highly for his many good qualities. When horses have once acquired this habit, I doubt if they ever forget it. By having a box or stall sealed up perfectly smooth they cannot get hold of anything, and few horses will crib if thus kept, though some press their teeth against the smooth side and accomplish it. There is a muzzle made through which horses can pick up their feed without being able either to bite or get hold of anything with their teeth. It is made with two small iron bars, joined to the nose band of the halter, far enough apart to allow motion of the lips sufficient to pick up their food.

Weaving is another very perplexing habit, acquired from I know not what, and once learned I could never cure. Prefail, high tempered horses are most prone to acquire it, and when at full work generally quit of their own accord. Some horses cannot be easy till they have pawed their bedding quite out of the way, leaving them a bare floor to lie on, soiling their clothes and hair in a manner not very agreeable to the groom, his duties thereby being much increased. Turning loose in a box will sometimes cure this evil, or by a clog fastened above the knee. When this is done there should be a pad applied to the shin, to keep the clog from injuring the very sensitive membrane covering the tendons. From having been led carelessly through a doorway, where they have been injured, horses are afterwards fearful of attempting the passage, and when urged to do so will go through with a bound that adds greatly to the danger. Compel the groom to get the horse square with the door before leading him out, holding him firmly by the halter, so that the leap cannot be made, never urging him to go faster than the slowest pace; in no case permitting a blow to be given. Rather than use force, either blindfold or back him out, until the fear is overcome by judicious usage.

Kicking the sides of the stall is a very unfortunate custom some horses possess, and no amount of punishment will cure one that has become determined in the practice. Clogs and whips are of no avail, and there seems to be almost a species of insanity compelling them to kick away till their legs are bruised and swollen from the blows. I had one very fine horse that I tried every method of cure I could hear of without effect. When he was shackled, of course he could not kick, neither could he lie down, and I have kept him standing for a week, when in less than an hour after the straps were removed he would fall to kicking as furiously as if the last time had to be made up. I cured him by putting him in a stall about the width usually made in livery stables, the sides of the same length of the horse when standing with his head at the manger. A bar was dropped behind his quarters to keep him from backing. Through the sides of the stall a slot was cut large enough to admit a plank two inches thick and eighteen inches wide. This plank came within half an inch of his loin, and of course he could not raise himself to kick. It was amusing to watch the rage he would get in in finding his most violent efforts frustrated. I looked for him to strike with one foot, and intended, if he had done so, to let a shelf extend on each side as high as his gaskins, which would have prevented that. The plank over the loin, however, cured him, and after going from my stable into a stall that had not these appliances, I never heard of his relapsing into his former bad practice.—*Colman's Rural World*.

Horse Cleaning by Machinery.

We cull from the *Manchester Guardian*, the following particulars of this useful contrivance:—"At the establishment of the Manchester Carriage Company, Pendleton, perhaps better known as Mr. Greenwood's, there is now in practical operation a novel and an ingenious system of cleaning horses by means of a steam brushing machine, invented by Mr. Haworth. The idea has evidently been derived from the revolving brush which many hairdressers have now in use, but the application of the idea to horse cleaning is of such utility, and has had so great an effect in economising labour, that it is worth a public notice, especially as we believe the machinery is not in use in any other stable. In the lower stable-yard at Pendleton there is a large shed, where ten or a dozen horses can be cleaned at one time. Along the centre of the roof is a revolving shaft, from which hang several endless straps. Each strap gives motion to a horizontal pole, at one end of which is a conical brush that rotates rapidly. On an omnibus horse being brought into the stable, after his three hours' work (during which, in any kind of weather, he removes from the roads of Manchester and Salford an almost incredible quantity of dirt), he is taken to this shed and a man applies to him the machine brush. In about half an hour the animal is thoroughly cleaned, and only the head requires finishing by hand. The cleaning effected by the machine is much more searching and effectual than the most diligent hand currying can possibly be, and to the majority of animals the greater cleanliness of their skins, as well as the improved circulation of the blood which is produced by the machine brush, appear to be acceptable. Most horses undergo the operation quietly and patiently, but in some animals timidity is produced by the rattle of the machinery. In so large an establishment as Mr. Greenwood's the most important result of the adoption of this invention is the economy of labour which results from it. Under the old system, a man was thought to have done a fair day's work if he cleaned ten or a dozen horses, but by the machine he can clean thirty in the same time, and with considerable less bodily labour. When it is remembered that from Pendleton several hundred horses are daily sent out to work, it will be seen how important a saving in money is effected by the employment of this new process. Another invention by Mr. Haworth is applied to the drainage of the stables. Instead of the ordinary sloping stone pavement, a flat floor of planks is constructed. A small space is left between each plank, and beneath these spaces are troughs which convey all moisture to a main covered channel. We are informed that this system of drainage has a very material effect in lessening the consumption of straw for litters."

Folding Sheep upon Vetches.

When vetches are grown upon poor soils, the most profitable way of using them is by folding sheep upon them. When sheep are turned in upon a piece of tares a large portion of the food is trodden down and wasted. Cutting the vetches and putting them into racks does not much mend the matter, as much is still pulled and wasted, and the manure unequally distributed over the land. To avoid these evils, hurdles with vertical spars, betwixt which the sheep can reach head and neck, are now used. These are set close up to the growing crop along a considerable stretch, and shifted forward as the sheep eat up what is within reach. This requires the constant attention of the shepherd, but the labour is repaid by the saving of the food, which being always fresh and clean, does the sheep more good. A modification of this plan is to use the same kind of hurdles, but, instead of shifting them as just described, to mow a swathe parallel to them, and fork this forward within reach of the sheep as required, repeating this as often during the day as is found necessary, and at night, moving them up to the growing crop, so that the sheep may lie for the next 24 hours on the space which has yielded food for the past day. During the night, they have such pickings as have been left on the recently-mown space, and so much of the growing crop as they can get at through the spars. There is less labour by this mode than the other, and in practice it has been found to do well.

As spring-sown vetches are in perfection at the season when the pastures usually get dry and scanty, a common practice is to cart them on to grassland, and spread them out in wisps, to be eaten by the sheep or cattle. It is, however, much better to have them eaten by sheep where they grow, or to cart them to the home fold.—*Ec.*